AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-11. (Canceled).

12. (Currently Amended) An apparatus for delivery and deployment of an expandable stent within a vessel, the apparatus comprising:

a catheter having a proximal end and a distal end,

an expandable means mounted at the distal end of the catheter and being expandable by means of a fluid pressure device and a liquid fluid, the expandable means being expandable from a delivery diameter to a deployment diameter,

a sheath being slidably mounted over the expandable means and being arranged for proximal retraction from over the expandable means by means of a retraction device, the retraction device comprises a cylinder-piston arrangement operated by the fluid pressure of the liquid, the cylinder-piston arrangement comprises an outlet connected to a fluid pressure line for applying the fluid pressure to the expandable means,

the fluid pressure device is further arranged for operating the retraction device so that the expandable means is expanded in response to the retraction of the sheath.

13. (Canceled).

14. (Previously Presented) The apparatus according to claim 12, further comprising a control means for controlling the fluid pressure operating the retraction device and the expandable means, either concurrently or sequentially.

15. (Previously Presented) The apparatus according to claim 13, wherein a first piston of the cylinder-piston arrangement is connected to the sheath via a wire.

16. (Previously Presented) An apparatus for delivery and deployment of an expandable stent within a vessel, the apparatus comprising:

a catheter having a proximal end and a distal end,

an expandable means mounted at the distal end of the catheter and being expandable by means of a fluid pressure device, the expandable means being expandable from a delivery diameter to a deployment diameter,

a sheath being slidably mounted over the expandable means and being arranged for proximal retraction from over the expandable means by means of a retraction device wherein the retraction device comprises a cylinder-piston arrangement operated by the fluid pressure, and

the fluid pressure device is further arranged for operating the retraction device so that the expandable means is expanded in response to the retraction of the sheath,

wherein the cylinder-piston arrangement comprises an outlet connected to a fluid pressure line for applying the fluid pressure to the expandable means.

17. (Previously Presented) The apparatus according to claim 16, wherein the cylinder-piston arrangement comprises a floating second piston for controlling the opening/closing of the outlet.

18. (Previously Presented) The apparatus according to claim 17, wherein during retraction of the sheath either the first piston or the second piston closes the outlet, and after at least partial retraction of the sheath the first and second pistons are in a position at the proximal end of the cylinder and the outlet is open.

19. (Previously Presented) The apparatus according to claim 18, wherein the first piston comprises a hook, the second piston comprises a first central opening, the cylinder comprises a second opening and a hook holder at its proximal end, so that during retraction of the sheath the shifting first piston moves the hook through the first opening and the second opening until the hook engages the hook holder.

20. (Previously Presented) The apparatus according to claim 16 wherein the first piston arrangement comprises a connector means and the cylinder comprises at its proximal end a receiving means for the connector means, so that after retraction of the sheath the connector means engages the receiving means and the outlet is in connection with the fluid pressure acting on the first piston.

21. (Previously Presented) The apparatus according to claim 15, wherein the cylinder-piston arrangement comprises the first piston and a two-position valve abutting via a spring at the proximal end of the cylinder, wherein in a closed position the valve shuts by the spring force channels penetrating the wall of the cylinder, and in an open position, the valve opens the channels after it is pushed by the piston when the sheath is retracted and connects a fluid pressure line from the fluid pressure device with a fluid pressure line so that the fluid pressure is applied to the expandable means.

22. (Canceled).

23. (Previously Presented) A system for delivery and deployment of an expandable stent within a vessel, the apparatus comprising:

a catheter having a proximal end and a distal end,

an expandable means mounted at the distal end of the catheter and being expandable by means of a fluid pressure device;

an expandable stent being expandable from a delivery diameter to a deployment diameter, the expandable stent being mounted on the catheter over the expandable means; and

a sheath being slidably mounted on the stent and being arranged for proximal retraction to expose the stent by means of a retraction device, the retraction device comprising a cylinder-piston arrangement operated by fluid pressure from the fluid pressure device, the cylinder-piston arrangement comprising an outlet connected to a fluid pressure line for applying the fluid pressure to the expandable means, the fluid pressure device is further arranged for operating the retraction device so that the expandable means is expanded in response to the retraction of the sheath.

24. (New) The system according to claim 23, wherein the cylinder-piston arrangement comprises a floating second piston for controlling the opening/closing of the outlet.

25. (New) The apparatus according to claim 24, wherein during retraction of the sheath either the first piston or the second piston closes the outlet, and after at least partial retraction of the sheath the first and second pistons are in a position at the proximal end of the cylinder and the outlet is open.

26. (New) The apparatus according to claim 25, wherein the first piston comprises a hook, the second piston comprises a first central opening, the cylinder comprises a second opening and a hook holder at its proximal end, so that during retraction of the sheath the shifting first piston moves the hook through the first opening and the second opening until the hook engages the hook holder.

27. (New) The apparatus according to claim 23 wherein the first piston arrangement comprises a connector means and the cylinder comprises at its proximal end a receiving means for the connector means, so that after retraction of the sheath the connector means engages the receiving means and the outlet is in connection with the fluid pressure acting on the first piston.